



Patent
A3-323 US

CLAIMS

1. An electrical connector, comprising:
a dielectric housing having a top mating face, a bottom face for mounting on a circuit board and a plurality of terminal-receiving passages extending between the faces;
a plurality of conductive terminals mounted on the housing and each terminal including
a base mounted in a respective one of the passages in the housing,
a solder tail extending from one end of the base for connection to an appropriate circuit trace on the circuit board, and
10 a contact portion extending from an opposite end of the base and exposed at the mating face of the housing for engaging an appropriate contact of a complementary connecting device; and
said housing including a plurality of holding slots at the bottom face thereof for receiving the solder tails of the terminals with interference fits to rigidly fix the solder tails to the housing.
2. The electrical connector of claim 1 wherein each of said holding slots at the bottom face of the housing includes at least one inner side wall having an inwardly projecting interference member for engaging a side edge of the respective solder tail in the slot.
3. The electrical connector of claim 2 wherein each holding slot has an opposing pair of said inner side walls having inwardly projecting, opposing interference members for engaging opposite side edges of the respective solder tail.
4. The electrical connector of claim 3 wherein said interference members have rounded engaging surfaces for engaging the opposite side edges of the respective solder tail.
5. The electrical connector of claim 1 wherein each of said holding slots has an elevated platform on which a respective solder tail is positioned to maintain the solder tail generally flush with the bottom face of the housing.

6. The electrical connector of claim 1 wherein said dielectric housing is molded of plastic material, the holding slots have opposite inner side walls, and the housing has cut-out areas between adjacent slots to increase the elasticity of the side walls.

7. The electrical connector of claim 1 wherein the base of each of said terminals includes at least one interference portion for engaging a side wall of a respective passage with an interference fit.

8. The electrical connector of claim 7 wherein the base of each of said terminals includes a pair of said interference portions in the form of wings projecting from opposite edges of the base for engaging opposite side walls of the respective passage with an interference fit.

9. The electrical connector of claim 1 wherein said terminals are stamped and formed of sheet metal material, and each terminal is generally U-shaped to define a pair of legs joined by a bent portion of the terminal, one leg defining said base and the opposite leg defining a spring arm bent back over the base and having said contact portion thereon.

10. The electrical connector of claim 9 wherein the solder tail of each U-shaped terminal is formed at a distal end of said one leg which defines the base, and the contact portion of each U-shaped terminal is formed as a contact dome projecting from one side of said opposite leg which defines said spring arm.

11. The electrical connector of claim 10, including complementary interengaging stop means between the housing and a distal end of said spring arm to limit the degree of flexing of the arm.

12. An electrical connector, comprising:

a dielectric housing having a top mating face, a bottom face for mounting on a circuit board and a plurality of terminal-receiving passages extending between the faces;

5 a plurality of generally U-shaped terminals mounted on the housing and each terminal defining a pair of legs joined by a bent portion of the terminal,

one of said legs of the U-shaped terminal defining a base mounted in a respective one of the passages in the housing with a solder tail extending from one end of the base for connection to an appropriate circuit trace on the circuit board, and

10 an opposite leg of the U-shaped terminal defining a spring arm bent back over the base and a contact portion formed as a contact dome projecting from one side of the spring arm and exposed at the mating face of the housing for engaging an appropriate contact of a complementary connecting device; and

15 said housing including a plurality of holding slots at the bottom face thereof for receiving the solder tails of the terminals with interference fits to rigidly fix the solder tails to the housing, each slot including a pair of opposite inner side walls having inwardly projecting opposing interference members having rounded engaging surfaces for engaging opposite side edges of the respective solder tail.

13. The electrical connector of claim 12 wherein each of said holding slots has an elevated platform on which a respective solder tail is positioned to maintain the solder tail generally flush with the bottom face of the housing.

14. The electrical connector of claim 12 wherein said dielectric housing is molded of plastic material and includes cut-out areas between adjacent slots to increase the elasticity of the side walls of the slots.

15. The electrical connector of claim 12 wherein the base of each of said terminals includes at least one interference portion for engaging a side wall of a respective passage with an interference fit.

16. The electrical connector of claim 15 wherein the base of each of said terminals includes a pair of said interference portions in the form of wings projecting from opposite edges of the base for engaging opposite side walls of the respective passage with an interference fit.

17. The electrical connector of claim 12, including complementary interengaging stop means between the housing and a distal end of said spring arm to limit the degree of flexing of the arm.